

WHAT IS CLAIMED IS:

1. A method for modeling the performance of a facility, in relation to resource utilization of such facility, comprising the steps of:

5 assigning a predefined template to a facility to be modeled, said predefined template including default facility attribute data;

obtaining resource utilization data for such facility; and

10 normalizing such resource utilization data based on said predefined template.

2. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 1, further comprising the step of creating an attributes catalog, wherein said
5 attributes catalog comprises selected of user-defined and system-defined attributes.

3. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 2, further comprising the step of using a template editor to assign said attributes to a
5 facility template.

4. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 2, wherein said attributes catalog is maintained in a predetermined electronic
5 storage.

5. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 2, further including a system level process, not accessible to a user, which
5 reclassifies a user-defined attribute as a system-defined attribute whenever a predetermined percentage

of users have added such user-defined attribute to the attributes catalog.

6. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 1, wherein said normalizing step is activated by selected of the following events:

5 (a) a user update of a facility model by modifying facility attribute values to reflect changes to said attribute values;

(b) the demand of a user; and

10 (c) the elapse of a predetermined period of time.

7. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 1, further comprising the step of estimating facility attribute data and facility resource utilization data for any period of time in the past.

8. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 1, further comprising the step of obtaining said resource utilization data and facility attribute data for two or more facilities.

5 9. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 8, further comprising the step of aggregating said resource utilization data and said facility attribute data, said data selected according to user defined criteria for a user defined group of facilities.

10. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 8, wherein said facility attribute data and resource utilization data include

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5 the aggregate sum of said data for two or more facilities.

11. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 1, further comprising the step of comparing said normalized resource utilization data
5 for a user defined group of facilities.

12. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 11, further comprising the step of benchmarking said facilities based on said
5 comparing step.

13. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 1, further comprising the step of presenting said data in the form of one of historical
5 reports and real-time reports.

14. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 1, wherein said resource utilization data is selected from the resources of
5 energy, water, natural gas and oil.

15. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 1, wherein said modeling method and said resource utilization data are provided to a
5 customer via intercommunicating electronic media.

16. A method for creating dynamic facility models, in relation to resource utilization of such facilities, and comparing resource utilization efficiency of such facilities, comprising the steps
5 of:

creating an attributes catalog wherein said attributes catalog comprises selected of user-defined attributes and system-defined attributes;

10 assigning attributes to a template selected of user-defined or system-defined templates;

assigning selected of said templates to a facility to be modeled;

obtaining resource utilization data for such facility;

15 normalizing such resource utilization data based on said predefined template; and

comparing selected of said resource utilization data so as to benchmark each facility based on said comparing.

17. A method for creating dynamic facility models, in relation to resource utilization of such facilities, and comparing resource utilization efficiency of such facilities as in claim 16, further comprising the step of using a template editor to assign selected of said attributes to a facility template.

18. A method for creating dynamic facility models, in relation to resource utilization of such facilities, and comparing resource utilization efficiency of such facilities as in claim 17, further comprising the step of estimating facility attribute data and facility resource utilization data for any period of time in the past.

19. A method for creating dynamic facility models, in relation to resource utilization of such facilities, and comparing resource utilization efficiency of such facilities as in claim 17, further comprising the step of aggregating said resource utilization data and facility attribute data, said

data selected according to user defined criteria for a user defined group of facilities.

20. The method for modeling the performance of a facility, in relation to resource utilization of such facility as in claim 16, wherein said normalizing step is activated by selected of the following events:

- 5 (a) a user update of a facility model by modifying facility attribute values to reflect changes to said attribute values;
- (b) the demand of a user; and
- (c) the elapse of a predetermined period of
- 10 time.

21. A method for creating dynamic facility models, in relation to resource utilization of such facilities, and comparing resource utilization efficiency of such facilities as in claim 16, further

5 comprising the step of using a facility editor to assign selected of said templates to a facility.

22. A method for creating dynamic facility models, in relation to resource utilization of such facilities, and comparing resource utilization efficiency of such facilities as in claim 16, further

5 comprising the step of obtaining resource utilization data and for obtaining facility attribute data for two or more facilities.

23. A method for creating dynamic facility models, in relation to resource utilization of such facilities, and comparing resource utilization efficiency of such facilities as in claim 22, wherein

5 said facility attribute data and resource utilization data include the aggregated sum of said data from two or more facilities.

24. A method for creating dynamic facility models, in relation to resource utilization of such

facilities, and comparing resource utilization efficiency of such facilities as in claim 16, comprising the step of presenting said data in the form of one of historical reports and real-time reports.

25. A method for creating dynamic facility models, in relation to resource utilization of such facilities, and comparing resource utilization efficiency of such facilities as in claim 16, further including a system level process, not accessible to a user, which reclassifies a user-defined attribute as a system-defined attribute whenever a predetermined percentage of users have added such user-defined attribute to the attributes catalog.

26. A method for creating dynamic facility models, in relation to resource utilization of such facilities, and comparing resource utilization efficiency of such facilities as in claim 16, wherein said attributes catalog is maintained in predetermined electronic storage.

27. A method for creating dynamic facility models, in relation to resource utilization of such facilities, and comparing resource utilization efficiency of such facilities as in claim 16, wherein said resource utilization data is selected from resources of energy, water, natural gas and oil.

28. A method for creating dynamic facility models, in relation to resource utilization of such facilities, and comparing resource utilization efficiency of such facilities as in claim 16, wherein said modeling method and said resource utilization data are provided to a customer via intercommunicating electronic media.

29. A method for creating dynamic facility models, in relation to resource utilization of such facilities, comparing resource utilization efficiency of such facilities, and generating reports in a user defined format, comprising the steps of:

creating an attributes catalog wherein said attributes catalog comprises selected of user-defined attributes and system-defined attributes;

using a template editor to assign attributes to a template selected of user-defined or system-defined templates;

using a facility editor to assign selected of said templates to a facility to be modeled;

obtaining resource utilization data for such facility;

normalizing such resource utilization data based on said predefined template;

comparing selected of said resource utilization data so as to benchmark each facility based on said comparing; and

generating one of historical and real-time reports, the data contained in such reports selected from facility modeling data, facility resource utilization data, and facility benchmarking data.

30. A method for creating dynamic facility models, in relation to resource utilization of such facilities, comparing resource utilization efficiency of such facilities, and generating reports in a user defined format as in claim 29, further comprising the step of estimating facility attribute data and facility resource utilization data for any period of time in the past.

31. A method for creating dynamic facility models, in relation to resource utilization of such

5 facilities, comparing resource utilization efficiency of such facilities, and generating reports in a user defined format as in claim 29, further comprising the step of obtaining said resource utilization data and facility attribute data for two or more facilities.

5 32. A method for creating dynamic facility models, in relation to resource utilization of such facilities, comparing resource utilization efficiency of such facilities, and generating reports in a user defined format as in claim 31, further comprising the step of aggregating said resource utilization data and facility attribute data, said data selected according to user defined criteria for a user defined group of facilities.

5 33. A method for creating dynamic facility models, in relation to resource utilization of such facilities, comparing resource utilization efficiency of such facilities, and generating reports in a user defined format as in claim 31, wherein said resource utilization data and said facility attribute data includes the aggregated sum of said data from two or more facilities.

5 34. A method for creating dynamic facility models, in relation to resource utilization of such facilities, comparing resource utilization efficiency of such facilities, and generating reports in a user defined format as in claim 29, wherein said attributes catalog is maintained in predetermined electronic storage.

5 35. A method for creating dynamic facility models, in relation to resource utilization of such facilities, comparing resource utilization efficiency of such facilities, and generating reports in a user defined format as in claim 29, further including a

system level process, not accessible to a user, which reclassifies a user-defined attribute as a system-defined attribute whenever a predetermined percentage of users have added such user-defined attribute to the attributes catalog.

36. A method for creating dynamic facility models, in relation to resource utilization of such facilities, comparing resource utilization efficiency of such facilities, and generating reports in a user defined format as in claim 29, wherein said resource utilization data is selected from resources of energy, water, natural gas and oil.

37. A method for creating dynamic facility models, in relation to resource utilization of such facilities, comparing resource utilization efficiency of such facilities, and generating reports in a user defined format as in claim 29, wherein said modeling method and said resource utilization data are provided to a customer via intercommunicating electronic media.

38. Apparatus for creating dynamic facility models, in relation to resource utilization of such facilities, comprising:

a facility editor for assigning a predefined template to a facility to be modeled, said predefined template including default facility attribute data;

data retrieval means for obtaining resource utilization data for such facility; and

data normalization means for normalizing said resource utilization data based on said predefined template.

39. An apparatus for creating dynamic facility models, in relation to resource utilization of such facilities as in claim 38, further comprising an

attributes catalog editor for performing functions
5 selected of:

- (i) creating new facility attributes;
- (ii) adding new facility attributes to said
attributes catalog; and
- (iii) deleting user-defined attributes from said
10 attributes catalog.

40. An apparatus for creating dynamic facility
models, in relation to resource utilization of such
facilities as in claim 39, further comprising data
storage means for storing said attributes catalog.

41. An apparatus for creating dynamic facility
models, in relation to resource utilization of such
facilities as in claim 38, further comprising means
for reclassifying a user-defined attribute as a
5 system-defined attribute whenever a predetermined
percentage of users have added such user-defined
attribute to said attributes catalog.

42. An apparatus for creating dynamic facility
models, in relation to resource utilization of such
facilities as in claim 38, further comprising a
template editor for assigning said facility
5 attributes, contained in said facility attributes
catalog, to a facility template.

43. An apparatus for creating dynamic facility
models, in relation to resource utilization of such
facilities as in claim 42, further comprising means
for estimating facility attribute data and facility
5 resource utilization data, for any period of time in
the past.

44. An apparatus for creating dynamic facility
models, in relation to resource utilization of such
facilities as in claim 38, wherein said data retrieval
means is further operative for obtaining said resource

5 utilization data and said facility attribute data for two or more facilities.

45. An apparatus for creating dynamic facility models, in relation to resource utilization of such facilities as in claim 44, further comprising means for aggregating said resource utilization data and
5 facility attribute data.

46. An apparatus for creating dynamic facility models, in relation to resource utilization of such facilities as in claim 45, further comprising means for aggregating said facility attribute data and said
5 resource utilization data, said data selected according to user defined criteria for a user defined group of facilities.

47. An apparatus for creating dynamic facility models, in relation to resource utilization of such facilities as in claim 38, further comprising means for comparing normalized resource utilization data for
5 the purpose of ranking the resource utilization of each facility based on such comparing.

48. An apparatus for creating dynamic facility models, in relation to resource utilization of such facilities as in claim 38, further comprising means for generating one of historical and real-time reports
5 of selected data.

49. An apparatus for creating dynamic facility models, in relation to resource utilization of such facilities as in claim 48, further comprising electronic media means for supplying customer access
5 to selected of said:

- (i) predefined template;
- (ii) resource utilization data retrieval means;
- (iii) data normalization means;

- (iv) default facility attribute data; and
10 (v) historical and real-time reports.

50. An apparatus for creating dynamic facility
models, in relation to resource utilization of such
facilities as in claim 38, wherein said resource
utilization data is selected from the resources
5 energy, water, natural gas and oil.

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